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PTO/SB/05 REV 1 (12/97)

Approved for use through 09/30/2000. omb 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

SJO920000165US2

First Inventor or Application Identifier

Ho et al

Title

READ HEAD HAVING A TUNNEL JUNCTION SENSOR WITH A
FREE LAYER BIASED BY EXCHANGE COUPLING WITH
INSULATING ANTIFERROMAGNETIC (AFM) LAYERS

Express Mail Label No.

EL 749517939 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

Mail Stop: Patent Application
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

1. ☒ Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)

2. ☒ Specification [Total Pages 20]

(preferred arrangement set forth below)

- Descriptive title of the invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the invention
- Brief Summary of the invention

- Brief Description of the Drawings (if filed)

- Detailed Description

- Claim(s)

- Abstract of the Disclosure

3. ☒ Drawing(s) (35 USC) 113 [Total Sheets 11]

4. ☒ Oath or Declaration [Total Pages 2]

a. ☐ Newly executed (original or copy)

b. ☒ Copy from a prior application (37 CFR 1.63(d))

(for continuation/divisional with Box 17 completed)

[Note Box 5 below]

i. ☐ DELETION OF INVENTOR(S)

Signed statement attached in the prior application, see
37 CFR 1.63(d)(2) and 1.33(b).

5. ☒ Incorporation by Reference (useable if Box 4b is checked)

The entire disclosure of the prior application, from which a copy
of the oath or declaration is supplied under Box 4b, is considered
as being part of the disclosure of the accompanying application
and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)

7. ☐ Nucleotide and/or Amino Acid Sequence Submission

(if applicable, all necessary)

a. ☐ Computer Readable Copy

b. ☐ Paper Copy (identical to computer copy)

c. ☐ Statement Verifying identity

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))

9. ☐ 37 CFR 3.73(b) Statement

(when there is an assignee) ☐ Power of Attorney

10. ☐ English Translation Document (if applicable)

11. ☒ Information Disclosure Statements ☐ Copies of
(IDS) w/PTO-1449 & PTO-892 IDS Citations

12. ☒ Preliminary Amendment

13. ☒ Return Receipt Postcard (MPEP 503)

(Should be specifically itemized)

14. ☐ Small Entity ☐ Statement filed in prior application,
Statement(s) ☐ Status still proper and desired

15. ☐ Certified Copy of Priority Document(s)

(if foreign priority is claimed)

16. ☒ Other: Express Mail Certification

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☒ Divisional ☐ Continuation-in-part (CIP)

of prior application No.: 10/054,656

Prior application information: Examiner W. J. Klimowicz

Group/Art Unit 2652

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or

☒

Correspondence address below

(Insert Customer No. or Attach bar code label here)

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(Ervin F. Johnston)

FAX: 808-661-9797

COUNTRY

USA

Name (Print/Type)

Ervin F. Johnston

Registration No. (Attorney/Agent)

20,190

Signature

Date

April / 72004

Please type a plus (+) sign inside this box -

+

PTO/SB/17 REV 1 (12/97)

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<div style="display: flex; align-items: center;"> <div> <p>16569</p> <p>PTO</p> <p>FEE TRANSMITTAL</p> <p><i>Patent fees are subject to annual revision on October 1. These are the fees effective November 10, 1998.</i></p> <p><i>Small entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12</i></p> <p><i>See 37 C.F.R. §§ 1.27 and 1.28</i></p> </div> </div>		Complete If Known																																																																																																	
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<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to:</p> <p>Deposit Account Number <u>09-0466</u></p> <p>Deposit Account Name <u>International Business Machines Corp.</u></p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance. 37 CFR 1.311(b)</p>		<p>3. ADDITIONAL FEES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Large Entity Code (\$)</th> <th>Small Entity Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>Surcharge - late provisional filing or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>Request for reexamination</td><td></td></tr> <tr><td>112</td><td>920</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>Extension for response within first month</td><td></td></tr> <tr><td>116</td><td>420</td><td>Extension for response within second month</td><td></td></tr> <tr><td>117</td><td>950</td><td>Extension for response within third month</td><td></td></tr> <tr><td>118</td><td>1,480</td><td>Extension for response within fourth month</td><td></td></tr> <tr><td>128</td><td>2,010</td><td>Extension for response within fifth month</td><td></td></tr> <tr><td>119</td><td>330</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>330</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>290</td><td>Request for oral hearing</td><td></td></tr> <tr><td>140</td><td>110</td><td>Petition to revive unavoidably abandoned application</td><td></td></tr> <tr><td>141</td><td>1,330</td><td>Petition to revive unintentionally abandoned application</td><td></td></tr> <tr><td>142</td><td>1,330</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>480</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>640</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>146</td><td>770</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>179</td><td>770</td><td>Request for continued examination (RCE) (37 CFR 1.114)</td><td></td></tr> </tbody> </table> <p>Other fee (specify) <u>Terminal Disclaimer</u></p> <p>Other fee (specify) <u>Application for Patent Term Adjustment</u></p> <p>Other fee (specify) <u>Certificate of Correction</u></p> <p>Other fee (specify) _____</p> <p style="text-align: right;">SUBTOTAL (3) (\$)</p>		Large Entity Code (\$)	Small Entity Code (\$)	Fee Description	Fee Paid	105	130	Surcharge - late filing fee or oath		127	50	Surcharge - late provisional filing or cover sheet		139	130	Non-English specification		147	2,520	Request for reexamination		112	920	Requesting publication of SIR prior to Examiner action		113	1,840*	Requesting publication of SIR after Examiner action		115	110	Extension for response within first month		116	420	Extension for response within second month		117	950	Extension for response within third month		118	1,480	Extension for response within fourth month		128	2,010	Extension for response within fifth month		119	330	Notice of Appeal		120	330	Filing a brief in support of an appeal		121	290	Request for oral hearing		140	110	Petition to revive unavoidably abandoned application		141	1,330	Petition to revive unintentionally abandoned application		142	1,330	Utility issue fee (or reissue)		143	480	Design issue fee		144	640	Plant issue fee		122	130	Petitions to the Commissioner		126	180	Submission of Information Disclosure Stmt		146	770	Filing a submission after final rejection (37 CFR 1.129(a))		179	770	Request for continued examination (RCE) (37 CFR 1.114)	
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SUBMITTED BY		COMPLETE (if applicable)	
Typed or Printed Name	Ervin F. Johnston	Reg. Number	20,190
Signature		Date	April 17, 2004

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Ervin F. Johnston

NAME



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